## Claims

1. A rostering system based upon genetic algorithms, said rostering system comprising:

   at least one storage medium;

   and

   a rostering engine, coupled to said at least one storage medium, said rostering engine being adapted to perform genetic algorithm evolution on an initial shift list matrix having one or more shift lists to thereby derive a roster, said genetic algorithm evolution being based upon dynamic adjusting factors, each of said dynamic adjusting factors being respectively associated with each of said shift lists.

2. The rostering system of Claim 1, wherein said dynamic adjusting factors comprises a shifting factor, said shifting factor being associated with each of said shift lists and based upon a predetermined time period.

3. The rostering system of Claim 2, wherein said rostering engine is further adapted to dynamically shift said shift lists in at least one evolutionary cycle based upon said shifting factor during said genetic algorithm evolution.

4. The rostering system of Claim 3, wherein said dynamic adjusting factors further comprises a swapping factor, said swapping factor being associated with each of said shift lists.

5. The rostering system of Claim 4, wherein said swapping factor comprises a gene group having two or more genes, each of said genes being associated with an individual shift within each of said shift lists.

6. The rostering system of Claim 5, wherein said rostering engine is further adapted to swap individual shifts of said gene group for each of said shift lists.

7.    The rostering system of Claim 1, wherein said rostering system further comprises a workload and shift setting optimizer for constructing said initial shift list matrix.

5    8.    In a rostering system based upon genetic algorithms, a method for processing user input information to derive a roster associated with one or more individuals, said method comprising the steps of:

initializing an initial shift list matrix, said initial shift list matrix having one or more shift lists respectively associated with said one or more individuals;

10    and

performing genetic algorithm evolution of said initial shift list matrix based upon dynamic adjusting factors, each of said dynamic adjusting factors being respectively associated with each of said shift lists.

15    9.    The method of Claim 8, wherein said performing step comprises the step of dynamically shifting said shift lists to form a plurality of shift list matrices in at least one evolutionary cycle based upon a shifting factor of said dynamic adjusting factors.

20    10.    The method of Claim 9, wherein said performing step further comprises the step of calculating fitness value for each of said plurality of shift list matrices.

11.    The method of Claim 10, wherein said performing step further comprises the step of selecting from said plurality of shift list matrices to construct a mating

25    pool based upon said fitness value.

12.    The method of Claim 11, wherein said performing step further comprises the step of swapping between individual shifts identified by a gene group for one or more of said shift lists, said gene group having two or more genes, each of said

30    genes being associated with an individual shift within each of said shift lists.

13.    A product comprising computer usable medium having a computer program recorded thereon for processing user input information to derive a roster associated with one or more individuals, said product comprising:

computer program code means for initializing an initial shift list matrix, said initial shift list matrix having one or more shift lists respectively associated with said one or more individuals;

and

computer program code means for performing genetic algorithm evolution of said initial shift list matrix based upon dynamic adjusting factors, each of said dynamic adjusting factors being respectively associated with each of said shift lists.

14.    The product of Claim 13, wherein said computer program code means for performing comprises computer program code means for dynamically shifting said shift lists to form a plurality of shift list matrices in at least one evolutionary cycle based upon a shifting factor of said dynamic adjusting factors.

15.    The product of Claim 14, wherein said computer program code means for performing further comprises computer program code means for calculating fitness value for each of said plurality of shift list matrices.

16.    The product of Claim 15, wherein said computer program code means for performing further comprises computer program code means for selecting from said plurality of shift list matrices to construct a mating pool based upon said fitness value.

17.    The product of Claim 16, wherein said computer program code means for performing further comprises computer program code means for swapping between individual shifts identified by a gene group for one or more of said shift lists, said gene group having two or more genes, each of said genes being associated with an individual shift within each of said shift lists.